AMENDMENTS TO THE CLAIMS:

Please cancel without prejudice claim 2, amend claims 1 and 3-17 and add newly written claim 18 as follows.

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. *(Currently Amended)* A light emitting device ~~(1)~~, having an input impedance and a device quantum efficiency, for generating at least two ~~or more~~ beams of output radiation from an input current of electrons comprising~~:~~:

at least two light emitting means ~~(2a, 2b)~~ for converting the input current of electrons into a beam of output radiation, each of the light emitting means having a respective optical waveguide and having an impedance and an individual quantum efficiency,

wherein the light emitting means ~~(2a, 2b)~~ (i) are electrically connected in series such that the input impedance of the light emitting device ~~(1)~~ is substantially equal to the sum of the impedances of the light emitting means ~~(2a, 2b)~~ and such that the quantum efficiency of the device ~~(1)~~ is substantially equal to the sum of the quantum efficiencies of the light emitting means and (ii) are arranged optically such that the light emitting means do not share a common optical waveguide.

2. *(Cancelled)*

3. *(Currently Amended)* The light emitting device of Claim 1, wherein the light emitting means ~~(2a, 2b)~~ are electrically connected such that the input impedance of the light emitting device is substantially equal to 50 Ω without additional circuitry or impedance matching elements.

4. *(Currently Amended)* The light emitting device of Claim 3, wherein each of the light emitting means ~~(2a, 2b)~~ have a modulation frequency limit and wherein the input impedance of the light emitting device ~~(1)~~ is substantially equal to 50 Ω across a frequency range substantially from DC to the modulation frequency limit of each of the light emitting means ~~(2a, 2b)~~.

5. *(Currently Amended)* The light emitting device ~~(1)~~ of Claim 1 wherein the light emitting means ~~(2a, 2b)~~ are p-n junctions ~~(4, 5, 6)~~.

6. *(Currently Amended)* The light emitting device ~~(1)~~ of Claim 5, wherein the p-n junctions ~~(4, 5, 6)~~ are laser diodes or light emitting diodes.

7. *(Currently Amended)* The light emitting device ~~(1)~~ of claim 6, wherein the laser diode devices may be any one of AlGaAs, AlGaInP, AlGaInAs or AlGaInAsP laser diode devices.

8. *(Currently Amended)* The light emitting device ~~(1)~~ of Claim 6, wherein the p-n junctions ~~(4, 5, 6)~~ each have an end face coated with a reflective coating.

9. *(Currently Amended)* An optically coupled transistor ~~(18)~~ for generating an output electrical signal comprising;

the light emitting device ~~(1; 21)~~ of Claim 1 for emitting at least two beams of output radiation ~~(29)~~ and

at least one photodetector ~~(23)~~ for detecting the beams of radiation output ~~(29)~~ from the light emitting device ~~(1)~~ and for converting the beams of output radiation ~~(29)~~ into an output electrical current ~~(Ie)~~,

wherein the light emitting device ~~(1)~~ and the at least one photodetector ~~(23)~~ are arranged such that there is no electrical feedback from the at least one photodetector ~~(23)~~ to the light emitting device ~~(1)~~.

10. *(Currently Amended)* The optically coupled transistor ~~(18)~~ of Claim 9 wherein the one or more photodetector is a photodiode device ~~(23)~~.

11. *(Currently Amended)* The optically coupled transistor ~~(18)~~ of Claim 9, comprising at least two photodetectors, wherein the photodetectors are connected in any one of a series connection, a parallel connection or a series parallel connection.

12. *(Currently Amended)* The optically coupled transistor ~~(18)~~ of Claim 9, comprising one or more optical fibres for transmitting the beams of output radiation ~~(29)~~ to the one or more photodetectors.

13. *(Currently Amended)* A fibre optic link comprising one or more optical fibres having an input endface and an output endface, and also comprising the light emitting device ~~(1)~~ of Claim 1,

wherein the light emitting device ~~(1)~~ is situated at the input endface of one or more optical fibres such that the beams of radiation output from the light emitting device are input to the one or more optical fibres.

14. *(Currently Amended)* A method for distributing an input signal into an output channel comprising the steps of;

(i) outputting two or more beams of radiation from the light emitting device ~~(1)~~ of Claim 1 comprising at least two light emitting means ~~(2a, 2b; 21)~~ and

(ii) inputting the two or more beams of output radiation into the output channel,

whereby the light emitting means ~~(2a, 2b; 21)~~ are connected such that the device quantum efficiency is greater than or equal to the individual quantum efficiency of one of the light emitting means.

15. *(Currently Amended)* A method for distributing an input signal into a plurality of output channels comprising the steps of;

(i) outputting two or more beams of radiation from the light emitting device ~~(1)~~ of Claim 1 comprising at least two light emitting means ~~(2a, 2b; 21)~~ and

(ii) inputting each of the two or more beams of output radiation into a different one of the output channels,

whereby the light emitting means ~~(2a, 2b; 21)~~ are connected such that the device quantum efficiency is greater than or equal to the individual quantum efficiency of one of the light emitting means.

16. *(Currently Amended)* An optical repeater for receiving an optical input signal and generating one or more optical output signals comprising;

a photodetector ~~(23)~~ for receiving the optical input signal and converting the optical input signal into an electrical signal and

the light emitting device ~~(1)~~ of Claim 1 for receiving the said electrical signal and outputting one or more optical signals.

17. *(Currently Amended)* The optical repeater of Claim 16 and also comprising amplification means for amplifying the electrical signal output from the photodetector ~~(23)~~.

18. *(New)* A light emitting device, having an input impedance and a device quantum efficiency, for generating at least two beams of output radiation from an input current of electrons comprising:

at least two light emitting apparatuses, each light emitting apparatus comprising at least one light emitting means for converting the input current of electrons into a beam of output radiation, each light emitting means having a respective optical waveguide and having an impedance and an individual quantum efficiency, and at least one of said at

least two light emitting apparatuses comprises at least two light emitting means electrically connected in parallel;

wherein the at least two light emitting apparatuses are electrically connected in series such that the input impedance of the light emitting device is substantially equal to the sum of the impedances of the at least two light emitting apparatuses and the quantum efficiency of the device is substantially equal to the sum of the quantum efficiencies of the light emitting means and

wherein the at least two light emitting apparatuses are arranged optically such that the light from one of the light emitting means is not transmitted to another of the light emitting means.